***Molar Conversions – Particles, Mass, and Volume***

1. How many moles of magnesium is 3.01 x 1022 atoms of magnesium?

2. How many liters are there in 4.00 moles of glucose, C6H12O6?

3. How many moles are 1.20 x 1025 atoms of phosphorous?

4. How many atoms are in 0.750 moles of zinc?

5. How many liters are in 0.400 moles of N2O5?

6. Find the number of moles in 28 L of C10H15O

7. Determine the mass, in grams, of 2.6 moles of C5H8O2.

8. Find the mass, in grams, of 1.00 x 1023 moles of nitrogen gas

9. How many particles are there in 1.43 moles of calcium?

10. Find the number of moles in 452 L of HClO3.

11. Find the grams in 1.26 x 10-4 mol of HC2H3O2

12. Find the mass in 2.6 mol of C8H12

13. Aspartame is an artificial sweetener with the molecular formula of C14H18N2O5 .

1. Calculate the molar mass of aspartame.

b) How many moles are in 10 g of aspartame?

c) What is the mass in grams of 1.56 moles of aspartame?

d) How many molecules are in 3.4 moles of aspartame?

e) How many moles are in 28 liters of aspartame?